

535,231

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047337 A1

(51) International Patent Classification⁷: **C07K 19/00**

(21) International Application Number:
PCT/KR2004/002945

(22) International Filing Date:
13 November 2004 (13.11.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2003-0080299
13 November 2003 (13.11.2003) KR

(71) Applicant (for all designated States except US): **HANMI PHARM. IND. CO., LTD.** [KR/KR]; #893-5 Hajeo-ri, Paltan-myeon, Hwaseong-si, Gyeonggi-do 445-813 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Young Min**

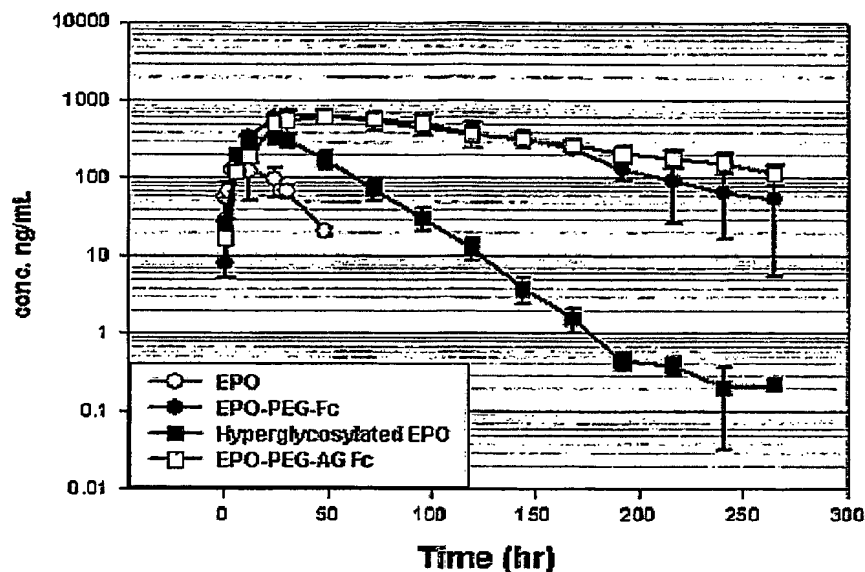
[KR/KR]; #102-803 Woonam Dreamvalley, Gomae-ri, Giheung-eup, Yongin-si, Gyeonggi-do 449-901 (KR). **SONG, Dae Hae** [KR/KR]; #103-1702 Baeksan Apt., Siheung-dong, Geumcheon-gu, Seoul 153-032 (KR). **JUNG, Sung Youb** [KR/KR]; #651-301 Miju Apt., Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-470 (KR). **KIM, Chang Hwan** [KR/KR]; #945-815 Lotte Apt., Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-470 (KR). **CHOI, In Young** [KR/KR]; #218-1403 WooSung Apt., Seohyeon-dong, Bundang-gu, Seongnam-si, Gyeonggi-do 463-773 (KR). **KWON, Se Chang** [KR/KR]; #1002-2103 Hyundai 10-cha Apt., Gwangjang-dong, Gwangjin-gu, Seoul 143-210 (KR). **LEE, Gwan Sun** [KR/KR]; #3-404 Woochang Apt., Ogeum-dong, Songpa-gu, Seoul 138-739 (KR).

(74) Agent: **SON, Min**; 19th Floor, City Air Tower, 159-9 Samsung-dong, Gangnam-gu, Seoul 135-973 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

[Continued on next page]

(54) Title: A PHARMACEUTICAL COMPOSITION COMPRISING AN IMMUNOGLOBULIN FC REGION AS A CARRIER



(57) Abstract: Disclosed is a novel use of an immunoglobulin Fc fragment, and more particularly, a pharmaceutical composition comprising an immunoglobulin Fc fragment as a carrier. The pharmaceutical composition comprising an immunoglobulin Fc fragment as a carrier remarkably extends the serum half-life of a drug while maintaining the in vivo activity of the drug at relatively high levels. Also, when the drug is a polypeptide drug, the pharmaceutical composition has less risk of inducing immune responses compared to a fusion protein of the immunoglobulin Fc fragment and a target protein, and is thus useful for developing long-acting formulations of various polypeptide drugs.

WO 2005/047337 A1



KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.